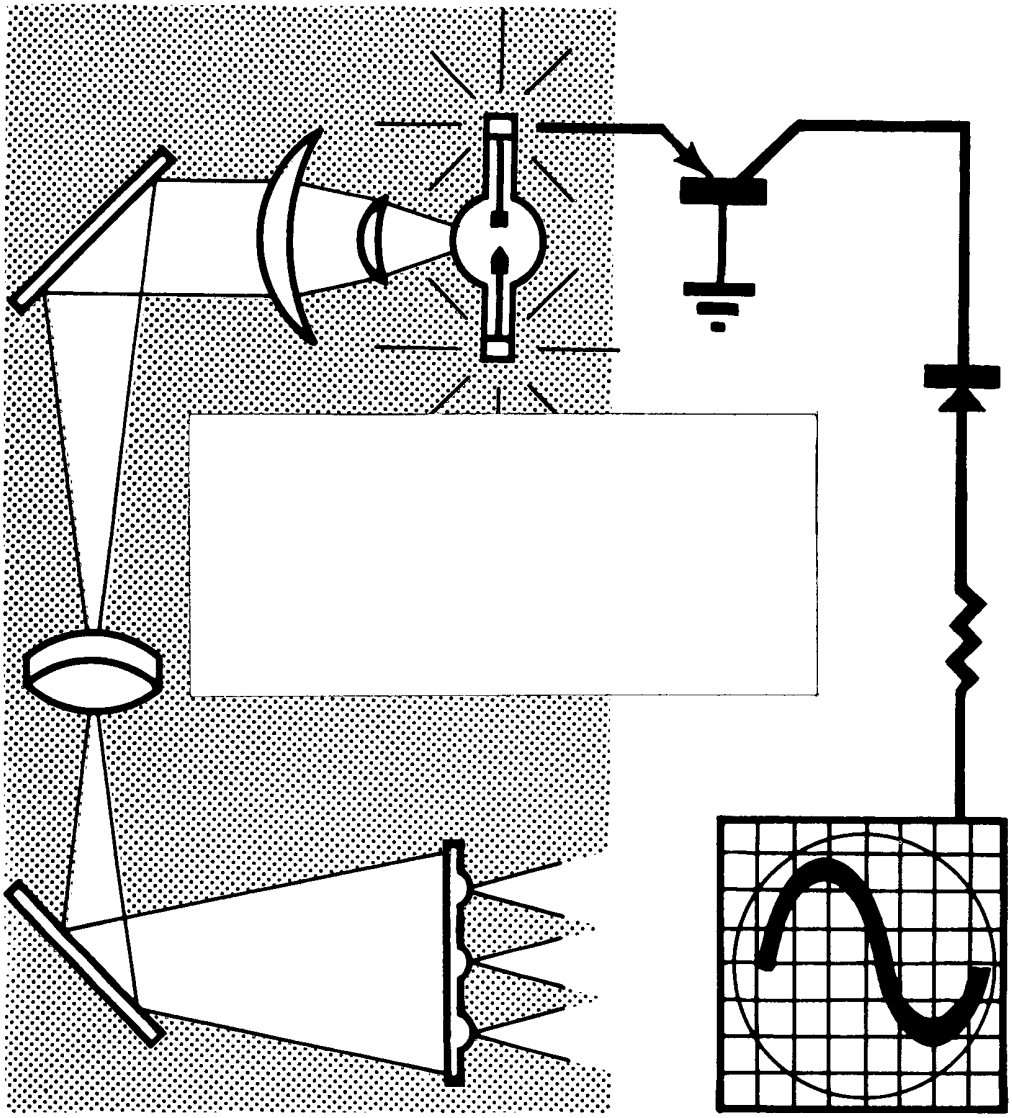

STAT

[redacted] STAT

April 30, 1971

Post Office Box 8274
Southwest Post Office
Washington, D. C. 20024

Attention: [redacted] STAT

Gentlemen: Re: Quotation No. 306

We are pleased to submit this proposal for the design and fabrication of a Wide Print Straightener in accordance with Specification No. 50080. This proposal is submitted in reply to RFP No. MM-09-71 (50080) dated March 18, 1971.

The total cost of this task is [redacted] fob Silver Spri STAT Maryland with delivery five months after receipt of order.

This proposal is valid for sixty days.

Very truly yours,

[redacted] STAT

SW:rln
Enclosures

[redacted] STAT

PROPOSAL FOR
WIDE PRINT STRAIGHTENER

Submitted to:

STAT

30 April 1971

Submitted by:

STAT

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LIST OF FIGURES

I. TASK ABSTRACT

This proposal covers the design and construction of an automatic device for straightening photographic prints to facilitate mounting on hardboard. This machine must accommodate a range of material widths from 70 millimeters to 30 1/2 inches, in single and double weight photographic paper. This task must be accomplished without chemicals, using steam or saturated water vapor. The unit must be production oriented and easily suited to transportation from one location to another.

II. INTRODUCTION

The print straightener called for in this task requirement must be capable of moistening the emulsion of photographic prints sufficiently to remove the tendency to curl, and to deliver them in essentially dry condition. This has been successfully accomplished in commercially available driers for prints up to 14 inches wide but is not available in widths of 30 1/2 inches which are required in this specification. This equipment is feasible; however, careful evaluation, design and construction are necessary to accomplish the required performance with the wider photographic material due to the nature of the water evaporation balance and the stability of paper, belts, feed systems, and other operational and control portions of the unit.

It is anticipated that this system can be produced in full accordance with the required specifications by the proper use of all prior inputs and good engineering procedures during the design and fabrication of the equipment.

III. TECHNICAL DISCUSSION

The design of a photographic print straightener using evaporated water vapor in the form of steam requires a very careful balance of moisture level to insure that the print comes out flat. This level must be controlled so that the final evaporation of moisture from the print takes place as the photographic material is passed over the final reverse curve roller so that the print does not spring back after it emerges from the device. To accomplish this it is necessary to critically control a number of parameters which include water temperature, belt speed, and final roller temperature. In order to achieve the control needed, past experience has shown that belt tension and belt tracking are major factors which affect the proper straightening of the photographic material. Therefore, the design must include a belt drive system which is variable in speed but which will maintain the selected speed within close limits. In addition, the length of evaporation area should be kept as short as possible to prevent over saturation with moisture. This will also improve tracking of the belts needed to carry the print through the device.

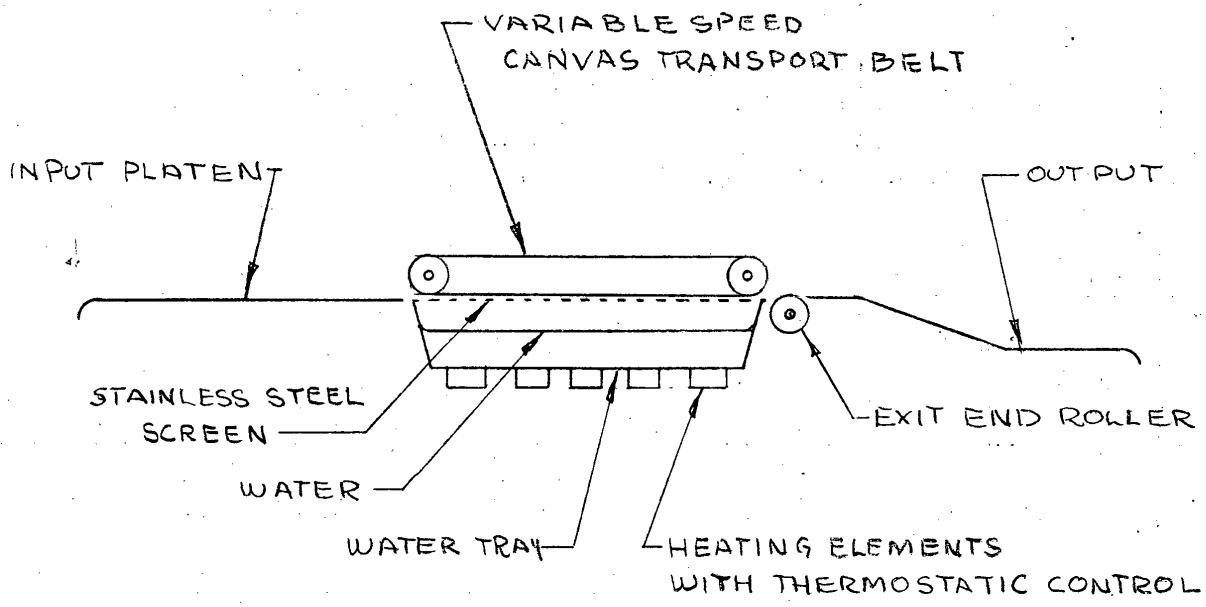
Care is required in design of the feed system to minimize danger of scratching the photographic emulsion which is delicate when wet.

IV. WORK STATEMENT

The design of this Print Straightener will be closely patterned after the Kodak Model 300 Print Straightener which gave optimum performance with 14 inch photographic material. This unit used a very short evaporating unit which was probably the greatest contributor to optimum system operation. The overall configuration is shown in Figure 1.

This system is based upon passing the print, emulsion down, over a stationary stainless steel mesh screen by means of a moving cloth conveyor belt in contact with the paper side of the print. The stainless steel screen must be sufficiently open to allow steam to pass through and moisten the emulsion, and must be very smooth to eliminate danger of scratches. The length of exposed emulsion in the direction of print travel will be limited to 12 to 14 inches to prevent the emulsion from becoming too soft.

The water tray will be approximately 12 inches long x 31 inches wide x 2 inches deep to cover the full width of the largest photographic print which will be accommodated. The water depth will be shallow, approximately 1 inch deep, to maintain a constant water temperature at the level selected to provide the desired moisture level at the print surface. A distributed or sectional heater will be provided



OVERALL CONFIGURATION OF PHOTOGRAPHIC PRINT STRAIGHTENER

FIGURE 1

under the water tray with individual thermostatic control to maintain a minimum temperature gradient in the water evaporation system. A separate reservoir with a float valve will maintain the water level in the water tray in a manner shown in Figure 2.

The electrical heaters will be of the strip type and will be mounted to the underside of the evaporator tray. The float system will have a second switch which will be a safety to cut off the heating system when the water level drops below 1/2 inch. This switch will automatically shut off the heaters and turn on a red warning indicator until the water level is restored. Thermostats on the heaters will minimize the warm up time required and insure that it is less than thirty minutes. The water level in the water evaporation tray will be replenished by a tube from the float controlled water reservoir which enters below the surface of the water. The water will feed to the evaporator tray by finding its own level. The water reservoir will be located at the 12 inch side of the water evaporator tray and will not be heated. All water trays will be of stainless steel to minimize corrosion.

It is usually recommended that distilled water be used in this type of device to minimize sediment and impuri-

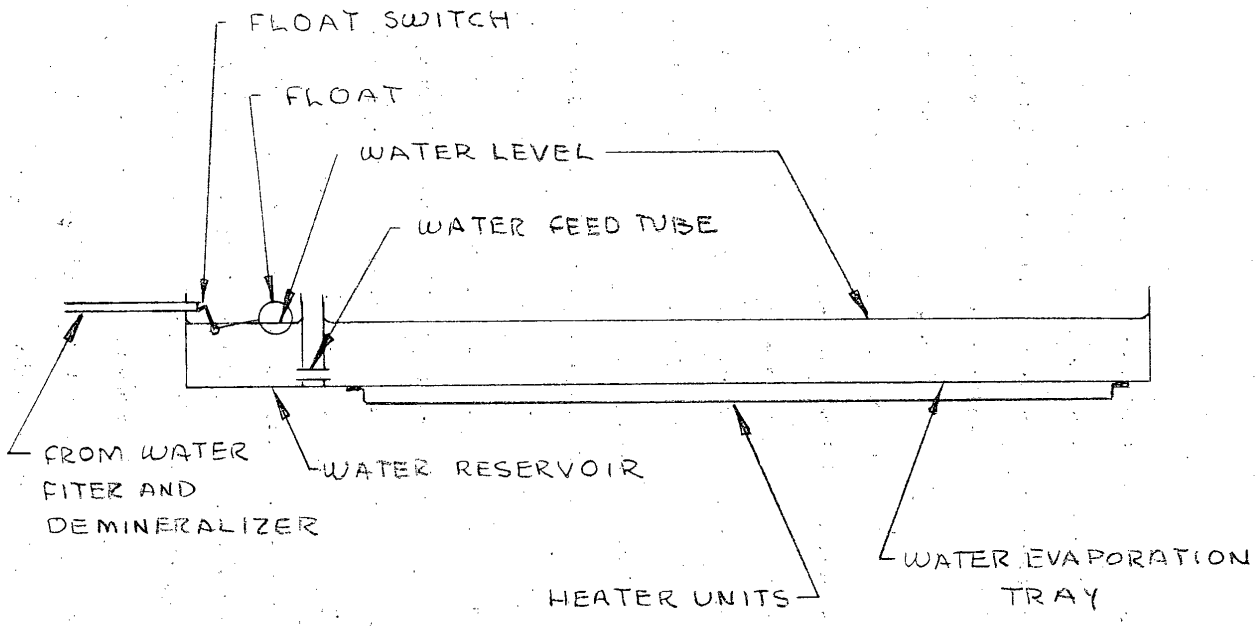


FIGURE 2 WATER LEVEL CONTROL SYSTEM

ties. For this purpose, a demineralizer and filter will be provided in the incoming water line to purify the water. This filter will have replaceable cartridges such as the Fisher No. 9-034-28 or equal. This unit contains an indicating meter which shows when the deionization cartridge needs replacement. An additional sediment filter will be installed before the demineralizer to remove solid matter. A solenoid valve will be connected to the input to the demineralizer to control water level in the water reservoir since the demineralizer is an unpressurized system. The float system will, therefore, only control the switch for the solenoid valve. A drain plug will be provided to allow all water to be removed easily from the system for periodic cleaning. A dial thermometer will be used to continuously display the temperature of the water in the evaporator tray.

One of the most critical points in this system is the feed belt. This belt will be fabricated of the highest grade of preshrunk cotton canvas or sail cloth consistent with stability and long life. The belt will be as short as possible to minimize stretching. The belt will be stretched between power driven feed and take up rollers which will have an automatic tension device to keep the belt tight. Flanges will be used on the ends of the rollers to guide the

belt and assure tracking. The feed and take up rollers will be driven by a suitable cog belt drive, such as the one shown in Figure 3, to insure that they are in synchronism.

The reverse curl will be adjusted by moving the output roller so that it changes the radius of wrap as the print emerges from the drive belt section. This roller will also be power driven and synchronized to reduce the danger of scratching the print.

The belt drive will be driven by a 115 volt d.c. shunt motor with a suitable gear reduction to feed prints at a rate to obtain optimum drying. This should be at a rate of approximately 1 to 6 inches per second but will depend upon the optimum temperature setting of the water evaporation tray. The d.c. shunt motor will be powered by a variable voltage regulated d.c. supply to insure speed regulation at the desired setting. The shunt motor will be operated with 115 volts d.c. on the field with variable control of armature voltage to give maximum torque and good speed regulation. The d.c. motor supply will be regulated so that it is independent of line voltage fluctuations to keep the print speed constant. The motor speed control will be mounted in a suitable recessed panel which can be locked after the optimum setting has been determined.

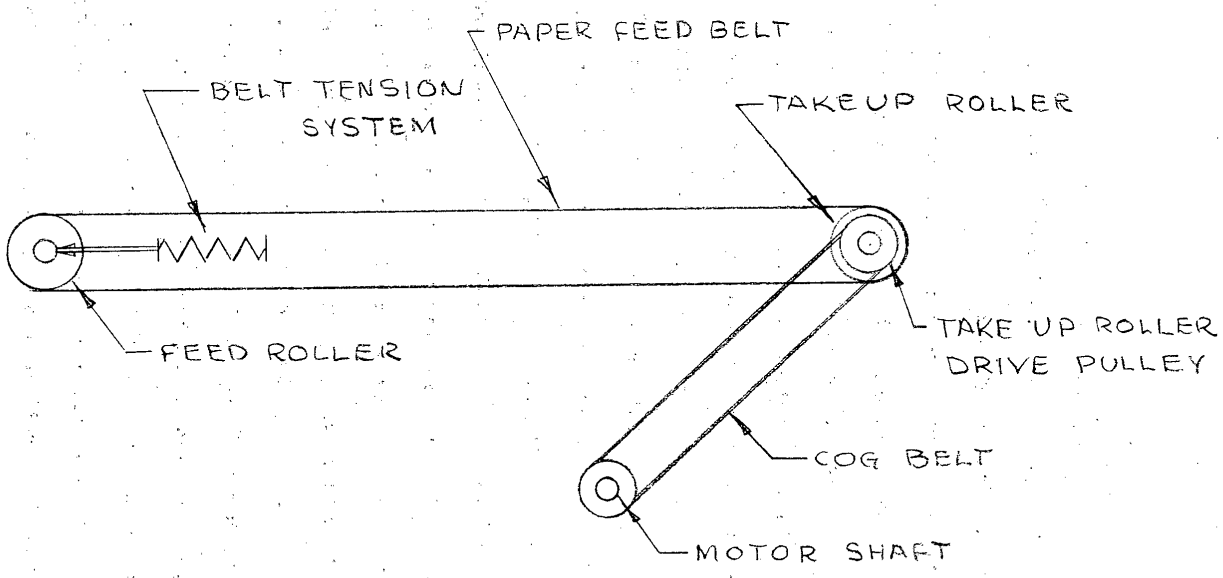


FIGURE 3 COG BELT DRIVE FOR PAPER FEED BELT ROLLERS

The overall design of the Print Straightener will use stainless steel and aluminum components, wherever possible, to minimize corrosion. Aluminum parts will be anodized or painted in accordance with good commercial practice. All shafts will use prelubricated bronze bearings and care will be taken in design to insure long life.

The unit will be covered with a suitable housing to make its operation independent of any cross drafts which may occur in the local environment. If necessary, forced air blowers will be used to circulate air over the drive belt to insure even operation, however, this may not be needed.

The overall size of the print straightener will be 34 inches wide x 36 inches long x 14 inches high. The length of 36 inches will include input and output tables which will be removable for shipping purposes.

The Print Straightener will be suitable for table mounting and will weigh less than 100 pounds.

All motors, heaters, and controls will operate from 115 volt, 60 cycle, a.c. power line and will be suitable protected by fuses to meet the industrial safety requirements. Current consumption will not exceed 20 amperes.

V. DELIVERABLE ITEMS

The deliverable items under this contract consist of the following:

ITEM	QTY.	DESCRIPTION
1	1	Wide Print Straightener as per Specification 60080
2	25	Set of 5 Monthly Reports, 5 copies each
3	5	Final Report
4	5	Operational and Maintenance Manual
5	1	Set of Manufacturers Engineering Drawings and Electrical Schematics

VI. SCHEDULE

The [redacted] proposes to accomplish the Wide Print Straightener project according to the following table. This table shows estimated percent completion and estimated percent of cost expenditure cumulatively on a monthly basis.

STAT

PERFORMANCE SCHEDULE	1	2	3	4	5
Performance Completion	10	25	50	75	100
Project Expenditure	10	20	45	80	100

VII. TIME BAR CHART - WIDE PRINT STRAIGHTENER

The [redacted] proposes to accomplish the technical tasks described in Section 4 - Requirements of the Development Objectives, on a planned and orderly basis. Proposed work progress versus time, with an expenditure schedule related to major task milestones, is shown in the accompanying time bar chart.

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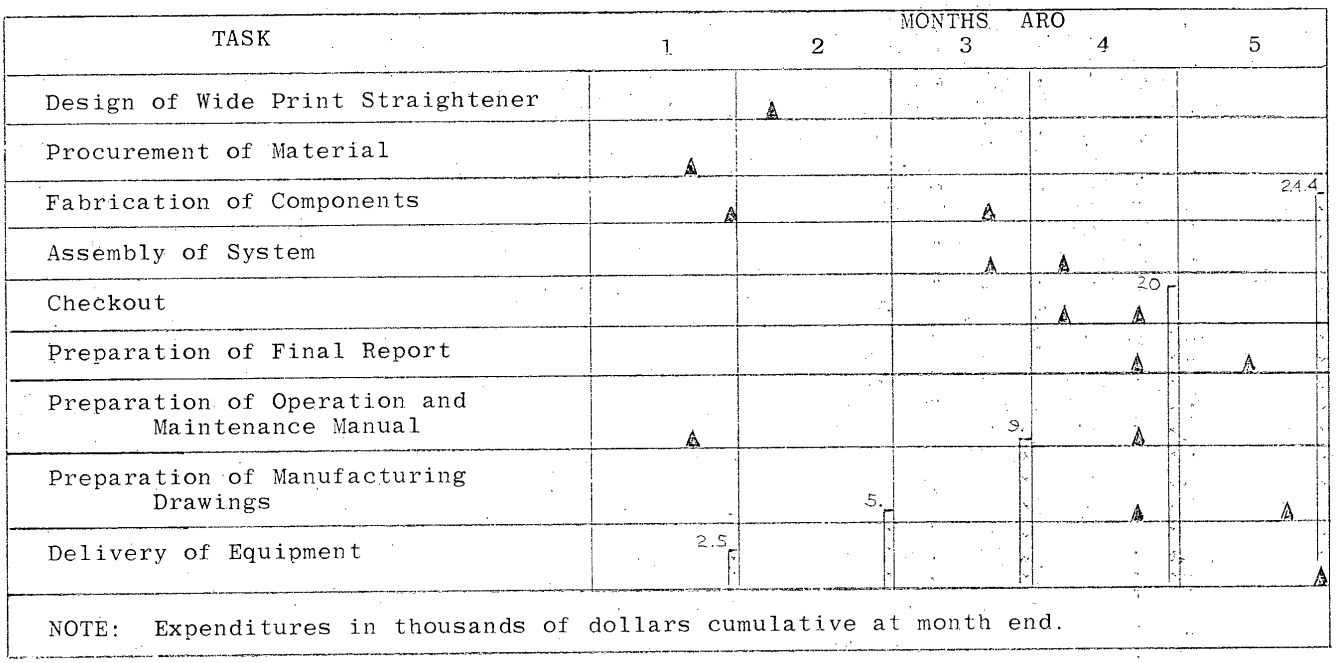
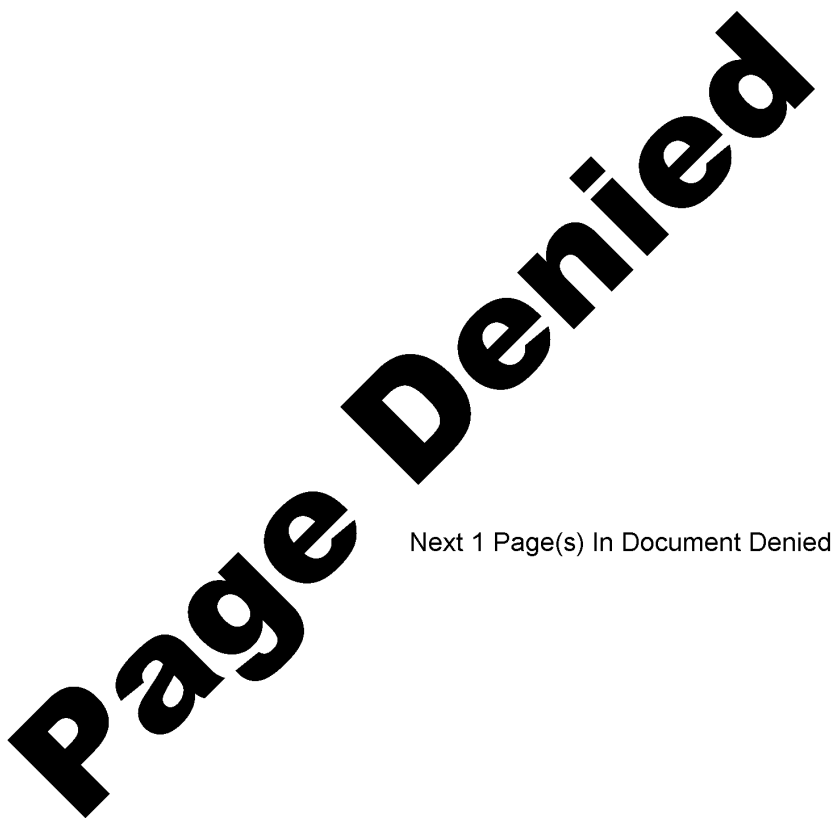


TIME BAR CHART

VIII. FINANCIAL CONSIDERATION

The estimated cost breakdown for accomplishing the proposed Wide Print Straightener project is presented in this section.



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IX. MANAGEMENT PLAN

The [redacted] recognizes that while STAT the proposed project is somewhat modest in scope, it does involve specialized technical development problems. Also a relatively short delivery schedule is desired. In view of these requirements, [redacted] proposes to ac- STAT complish the project primarly with relatively senior technical personnel whose experience is directly applicable to the problems involved.

Accordingly, [redacted] will serve as Program STAT Director for the project. His great depth of experience in all major aspects of design, development, and production of electro-optical and photographic instruments and systems will ensure efficient structuring and direction of the technical effort involved.

[redacted] will be assisted in mechanical design and STAT implementation by [redacted] who has specialized STAT in detailed mechanical design and engineering aspects of cameras, projectors, printers, and related equipment. In addition to participating in system design, [redacted] STAT will lay out and supervise the fabrication and assembly of the final unit.

These key personnel will be supported by additional

technical and shop personnel as required. In addition to the technical staff, the shop force includes machinists, assemblers, lens grinders, and laboratory technicians with a depth of experience in fabrication, assembly, and test of similar equipment.

Accordingly, [redacted] is confident that it STAT has the appropriate organization structure and requisite technical management and shop personnel to accomplish the proposed project.

X. COMPANY CAPABILITY

A. General Experience

The [redacted] an applied research laboratory devoted to the design and development of optical, electronic, and mechanical instruments and systems is especially interested in the proposed development area. Since its inception in 1962, as [redacted] it has performed, in a highly successful manner, a number of applied research and development contracts for the military, other Government agencies, and private industry. STAT STAT

Much of its work has involved the design, development, and fabrication of optical and photographic equipment and systems for recording and presentation of data. This has included the production of highly precise optical measuring and calibrating instruments, infrared and ultraviolet projectors and detectors, transducers, light sources, and laser instrumentation. Significant activities include the development of simulators utilizing specialized camera and projection techniques, special purpose computers, storage and retrieval systems, servo systems, and digital and analog magnetic tape systems. It also has been very active in the design, development, and fabrication of instruments and systems to accomplish sensing, sorting, packing, and transporting

functions in material handling, food handling, assembly line operations, and related industrial applications. It has developed its own line of industrial TransfeRobot devices which provide the basis for a variety of these industrial automation systems. Much of the [redacted] STAT experience acquired in the development of its corporate line of electro-optical instruments is directly applicable to successful accomplishment of related research and development projects. Representative [redacted] products STAT include: modulation transfer function systems, image intensifier systems, digital photometers, precision light sources, visual photometers, low level light attenuators, photomultiplier detection units, scanning microscopes, ultraviolet projectors, infrared microcollimators, and regulated power supplies.

A significant part of its work has bordered on the state-of-the-art in both conceptual design and fabrication techniques. This is particularly true of work done in camera and projector design and the design and development of modulation transfer function test systems, a field in which [redacted] believes its systems now represent the state STAT of-the-art.

B. Modulation Transfer Function Test System

During the past two (2) years, [redacted] STAT has devoted considerable effort to the design STAT and development of modulation transfer function test systems. This effort has contributed significantly to advancing the state-of-the-art for such systems. Since this work is so closely related to the various measurement and evaluation facets of electro-optical technology, a summary of [redacted] activity is included. STAT

Initial Modulation Transfer Function Test Systems

Initial work was undertaken in support of the U. S. Army Night Vision Laboratory, Fort Belvoir, Virginia, which was concerned with the critical problem of ensuring reliable and accurate testing of various light emitting and transmitting devices. [redacted] conducted an analytical STAT study and completed design and fabrication of equipment to demonstrate the feasibility of rapid, reliable, and accurate testing of image intensifier tubes to determine operational characteristics. The analysis focused upon the recognition that the improvement of any device is highly dependent upon the ability to test it. The image intensifier tube is such a device requiring a compatible system embracing optical, mechanical, and electronic technology. In recognition of the critical necessity of testing for operational performance,

the design approach established system functional and testing requirements. Breadboard equipment then was designed and fabricated to verify feasibility testing. This represented a basic modulation transfer function test system composed of a basic optical bench, various photometric optical and electronic elements integrated into a very versatile scanning system. The results obtained verified the authenticity of the theoretical approach and demonstrated the practical application of the breadboard equipment. Subsequent augmentations of the system have been effected. The system proved to be highly reliable and still is in use in the Laboratory.

Company Funded Applied Research

In conducting the preceding project, STAT became intimately familiar with the critical testing requirements faced by both Government and industry laboratories in association with the development and implementation of state-of-the-art sensing and viewing systems; the design and fabrication of optical lenses for critical applications; the varied and critical requirements for accurate testing of image intensifier tubes; and the ever increasing requirement to provide, whenever possible, an expansion capability to satisfy future requirements. In association with this effort, STAT STAT made a detailed survey of the various electro-optica

measurement and testing equipment available to Government and industry. It was found that there was various equipment available, highly suited to provide excellent results for particular testing requirements, but few which completely satisfied the requirements for a variety or broad range of critical testing requirements. It also was found that available testing equipment would be of marginal utility only in testing second generation image intensifier tubes.

Based upon the understanding thus gained of the requirements for testing equipment in the electro-optical environment, [redacted] concluded that there was a STAT definite need for a range of high quality instruments and that one of the most urgent needs was for a modulation transfer function measurement system which could handle all current measurement problems and also provide a capability to handle second generation measurement problems as they arise. Consequently, [redacted] undertook and has STAT completed a Company funded applied research program to meet this critical need.

Current [redacted] MTF Test Systems STAT

As a consequence of this effort, [redacted] STAT has developed three (3) separate modulation transfer function

test systems. Design of these systems has considered not only the precise measurement requirements basic to an MTF test system, but also the needs and conveniences of the human operators. Thus, each [redacted] system features STAT rapid setup and alignment, push button control, digital read-out, and self-calibration. Modular attachments minimize setup time. Motorized controls simplify operation and ease time demand on the operator. A rigid but relatively light-weight axionic optical bench, with the widest rail spacing (9 inches) available in commercial optical benches, is basic to each system. Digital readout and X-Y curve plottings facilitate reading of test results. Each system provides speedy, efficient in line testing, and stable, reliable data. Repetitive, repeatable testing is a unique feature of these systems. The Model 1520 is an Infinite Conjugate system; the Model 1530, a Finite Conjugate system, both for testing optical components and electro-optical systems at high light levels, while the Model 1540, an Infinite Conjugate system, for testing optical components at high light levels, is specially intended for visual testing. Detailed specifications for each system are appended.

C. Directly Related Experience

. Modulation Transfer Function Test System, U.S.A.

Electronic Proving Ground, Fort Huachuca, Arizona, [redacted] STAT

Under this contract, [redacted] STAT fabricated and delivered a Modulation Transfer Function Test System specifically designed for direct optical system and component testing. Major components include: Axionic Optical Bench: [redacted] STAT Model 164, six (6) feet, with 10 foot folded optical path, rigid, 9" rail spacing. Source Generator: consisting of [redacted] STAT Model 136 Precision Light Source, with neutral density filters for source attenuation; [redacted] STAT Model 117-1R, Regulated Power Supply, to power the quartz iodine light source; [redacted] STAT Model 137-1, Adjustable Rotary Slit; [redacted] STAT Model 138, Projection Microscope, and a very high quality 10X planoapochromatic objective with numerical aperture of 0.32 to give performance up to diffraction limit. Analyzer: [redacted] STAT Model 178(M), large drum with 15 spatial frequency patterns and mount for 12X or 24X relay lens to give spatial frequencies of 0 to 100 and 0 to 200 line pairs per millimeter, respectively. Attached to the Analyzer is a [redacted] STAT Model 145, Photomultiplier, which contains a 14-stage photomultiplier tube and suitable operational amplifier. Electronic Control Unit: [redacted] STAT Model

171(M), containing master electronic control panel for selecting mode of operation, spatial frequency, scope output, and digital readout display. An X-Y Recorder, also contained in the console, is used to trace the MTF curve in the automatic scan operation mode. Support Table: The system is supplied with a steel frame table with leveling screws, rack mounting for electronics, and shelves for storing accessories.

The system uses a slit input and scanner output mode of operation. It permits both modulation transfer and contrast transfer measurements, allows both tangential and sagittal readings, provides four (4) figure digital readout of percent modulation, offers static, dynamic, and automatic scan operation, permits both finite and infinite conjugate testing, and meets the following performance specifications:

Frequency Range:	0-200 lines per millimeter
Modulation Range:	0 to 100%
Accuracy:	±3% or better
Repeatability:	±1%

- Optical Bench Assembly, U. S. Naval Observatory, Washington, D. C., [redacted] STAT

Under this current contract, [redacted] is STAT furnishing a system consisting of an optical bench, collimator,

lamp, lamp housing, and carriages, lens chuck, and related accessories.

For this system, [redacted] has designed STAT and produced Model 184, Precision Optical Bench, a 10 foot Meehanite cast iron, lathe bed type with the ways straight to within 0.003 inch.

- Opaque Projector Project, Bureau of Naval Personnel, [redacted] STAT

Under this recent contract, [redacted] STAT designed and fabricated six (6) opaque projector systems to provide a significant improvement over currently available projection systems. A design requirement was that the projector take the full 8-1/2 inch by 11 inch projection format and give a high light level on the screen, a capability not met by available standard opaque projectors. This requirement was achieved by a high speed projection system with a much larger projection lens. This design encompassed a newly developed optical projection system as well as the use of advanced optical materials and new high efficiency lamps. This work was done in accord with a tight development schedule.

- Image Intensifier Test Equipment, U. S. Army Night Vision Laboratory, [redacted] STAT [redacted] STAT

Under this recent contract, [redacted] STAT

conducted an analytical study and completed the design and fabrication of equipment to demonstrate the feasibility of rapid, reliable, and accurate testing of image intensifier tubes to determine operational characteristics. The analysis focused upon the recognition that the improvement of any device is highly dependent upon the ability to adequately test it. The image intensifier tube is such a device requiring a compatible system embracing optical, mechanical, and electronic technology. In recognition of the critical necessity of testing for operational performance, the design approach established system functional and testing requirements. Breadboard equipment then was designed and fabricated to verify feasibility testing. This included optical lenses and a turret system. The results obtained verified the authenticity of the theoretical approach and demonstrated the practical application of the breadboard equipment. The equipment was found to be highly reliable and is in continued use in the laboratory.

- Display Techniques, U. S. Army Night Vision Laboratory, [redacted] STAT [redacted] performed an analysis of display STAT techniques required for simulation of night vision problems in a fully implemented visionics laboratory. This included

equipment for the display of stationary, matted, and motion picture imagery using refined projection techniques under computer control. Parameters to be varied included: spectral quality, resolution, light level, and targets. This laboratory will be used to evaluate new generations of night vision sensors under conditions which might predict field performance.

- Large Format Quick Copy Camera, USAF, Rome Air Development Center, [redacted] STAT

Under this recent contract, [redacted] STAT developed a large format quick copy camera for use on a photo-interpreter's light table to make medium resolution, low magnification copies of aerial reconnaissance images. This camera had to be light in weight and still meet stringent optical and photographic requirements. An initial experimental unit was designed and tested to prove technical soundness. After acceptance testing was completed, additional units were fabricated. A maximum weight specification of 12.5 pounds imposed stringent design requiremtents, particularly since the single camera system had to provide four (4) magnifications of 15X, 7.5X, 3X, and 1X to cover an 8 inch x 10 inch film format. Also, the camera was required to have a rapid processing capability, using high speed ASA 3000 film, to provide a high quality print in less than one (1)

minute. Consequently, design had to determine for each magnification, the appropriate object and image distances, focal lengths, and angular fields. In turn, these parameters had to be analyzed and evaluated in terms of camera configuration, mounting, mobility, reliability, and stability requirements. In addition, since this was to be a large format quick copy camera, special design consideration was given to the type of photosensitive copy material and to minimum processing time requirements. This latter required design of a shutter and automatic exposure controls. All of these related operational requirements had to be implemented in a mechanical design for accuracy, durability, and lightweight within a 10 month period. Consequently, this project bordered on the state-of-the-art in camera design and fabrication technology.

- Design and Fabrication of Experimental Test Stations, U. S. Air Force, Rome Air Development Center, [redacted] STAT

  Under this contract, [redacted] (then STAT [redacted] completed the design and fabrication of STAT experimental test stations for use in the Interpretation Test Facility. These were modular stations containing individual viewing stations, output recording, with intercommunications between individual stations and a central

monitoring station. The design provided for flexibility of arrangement and combinations of stations.

- Computerized Photo-Interpretation Laboratory, U. S. Army, Personnal Research Office, Contract [redacted] STAT

This contract effort entailed conceptual design of a computerized laboratory for evaluation and testing of photointerpretation techniques for tactical applications. A special computer language was developed and a fully integrated laboratory was designed and fabricated to display photographic, [redacted] STAT tation and reduce the data. This laboratory contained state-of-the-art display systems and was compatible with new devices in development for future reconnaissance systems.

- Development of Dynamic Automobile Driver Simulator, U. S. Public Health Service, [redacted] STAT STAT

Under contract to [redacted] STAT [redacted] performed the detailed STAT design and fabrication of an automobile simulator now in use at the Driver Simulation Laboratory of the Department of Health, Education, and Welfare at Providence, Rhode Island. This system provides a display which is fully responsive to driver actions. The driver subject views the driving environment in

full color through an especially developed optical and projection system which makes the one-half inch to one (1) foot scale of the device seem real both in size and relative speed.

D. Other Related Experience

- Department of Health, Education, and Welfare, Division of Public Health Service

  Designed and constructed an automatic scanning densitometer with digital output for reading X-ray plates.

- [redacted] STAT

  Redesigned an optical projection system for language teaching machine using 8 mm film with magnetic sound.

- [redacted] Industrial Projects Division STAT

  Tested and redesigned optical projection system for "autotutor" teaching machine.

- [redacted] STAT

  Designed and fabricated special purpose light source, and precision reticle projector for optical bench tests.

- [redacted] STAT

  Designed a focusing meter for photographic imagery.

- [redacted] STAT

  Designed and constructed a digital code reading

scanner with fiber optic decoding device.

• [redacted] STAT

Designed and constructed a special light measuring system for 33 mm additive color high speed motion picture printer.

E. Electro-Optical Instruments

In addition to previously described MTF systems, [redacted] has completed applied research, feasibility STAT demonstration, prototype fabrication, and unit production of a corporate line of approximately 65 electro-optical instruments. A catalog is appended.

F. Facilities

The [redacted] occupies approxi- STAT mately 13,000 square feet of modern office, laboratory, and fabrication facilities at two (2) separate locations in Silver Spring, Maryland. The electronic, optical, and photographic facilities, as well as a model fabrication shop and an optical grinding shop are housed in a 10,000 square foot facility. Additional fabrication, assembly and testing facilities are contained in another building with 3000 square feet of work space.

Each of the technical work areas contains required and appropriate instrumentation, measurement, and production

tools. Much of the optical and photographic equipment in use has been produced by [redacted] Optical equipment includes a variety of optical benches, measuring microscopes, collimators, comparators, and light sources. Other equipment includes lens grinders, polishers, cutters, edgers, scribers, and etching devices. The electronics work area includes a variety of oscilloscopes, generators, meters, power supplies, analyzers, recorders, and related equipment. The model shop and fabrication area is equipped with the required variety of general and specialized lathes, shapers, millers, grinders, saws, presses, brakes, welding, and assembly equipment. STAT

A specialized testing capability inherent in available [redacted] facilities will be particularly applicable to the proposed development project measurement and evaluation tests as well as quality assurance testing. The [redacted] Modulation Transfer Function Test Systems are uniquely suited to the requirements of this project. Also, standard [redacted] instruments, such as the Model 112, Brightness Meter; the Model 122, Illumination Meter; and the Model 132, Visual Photometer, together with appropriate laboratory control facilities are readily available to perform tests for illumination level, minimum brightness, STAT STAT STAT

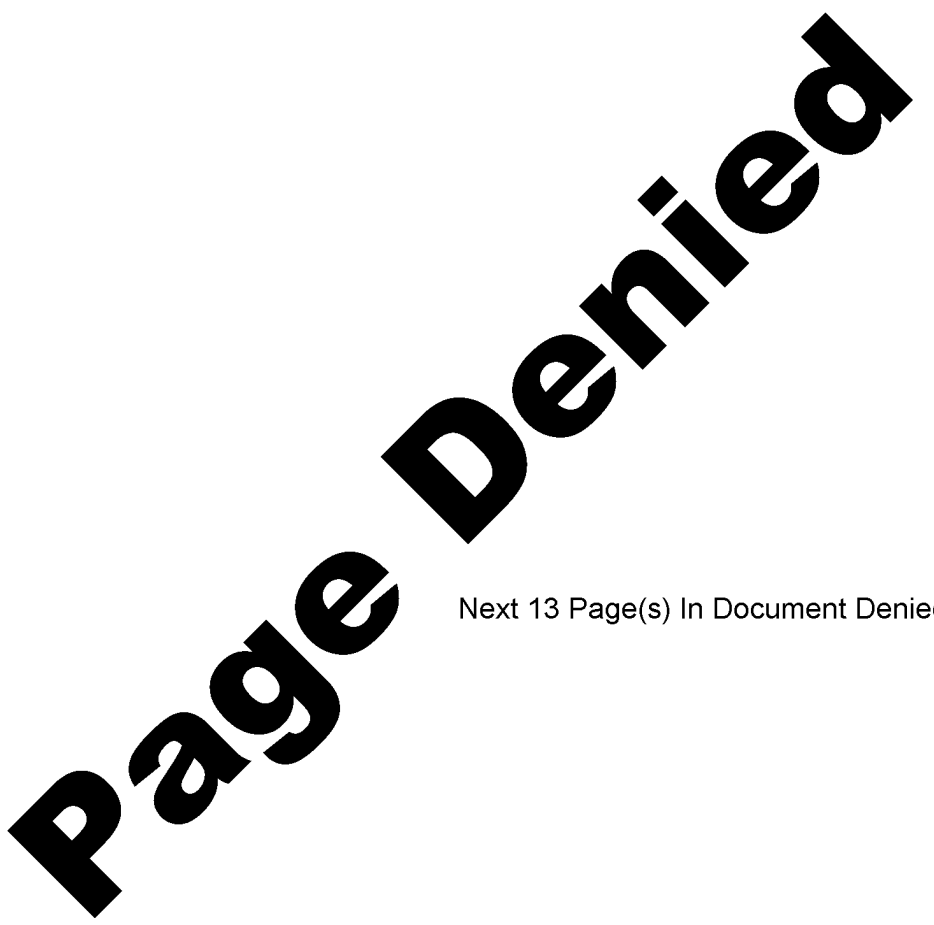
uniformity of illumination, and similar critical performance characteristics. In addition, [redacted] technicians STAT are skilled and trained in setting up and conducting modulation transfer function tests and related optical measurement tests using these specialized [redacted] equip- STAT ment and facilities.

A technical library housing basic and specialized works on optics, electronics, mechanical engineering, photography, and related technical fields is available to the technicall staff.

These facilities will be wholly adequate for design fabrication, and test requirements of the proposed development project.

G. Facility Clearance

The [redacted] formerly known STAT as [redacted] was granted a Secret facility STAT clearance on May 4, 1964, by the Defense Contract Management Services Region, Philadelphia, Pennsylvania, Classified storage capabilities will be adequate to support the proposed project.



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